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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/715,013	11/20/2000	Keunsuk P. Chang	361752000500	7915

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EXAMINER

FERGUSON, LAWRENCE D

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/715,013

Applicant(s)

CHANG ET AL.

Examiner

Lawrence D Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20, 24-44 and 46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20, 24-44 and 46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment mailed March 8, 2004.

Claims 1, 3, 16, 25 and 27-20 were amended rendering claims 1-20, 24-44 and 46 pending.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-13, 15 and 25-40 of provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 10/270,734. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both include a

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laminate film comprising a polyolefin resin layer having a discharge treated surface and a metal layer having an optical density deposited on said discharge treated surface of said polyolefin resin layer, wherein the discharge treated surface is formed in an atmosphere of Co_2 and N_2 and has a barrier durability at 9% elongation of 46.5 cc/m²/day oxygen transmission rate. They also both include wherein the polyolefin resin layer has a thickness of about 6 to 40 μm and comprises polypropylene resin. They both include wherein the heat sealable or winding layer has a thickness of about 0.5 to 5.0 μm with comprising a ternary ethylene-propylene-butene copolymer, wherein the metal layer has a thickness of about 5 to 100 nm and an optical density of about 2.6 to 5.0.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections – 35 USC § 103(a)

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13, 15 and 25-37, 39-40 are provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Chang U.S. 2003/0082390 which has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e) if

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published or patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future publication or patenting of the conflicting application.

Chang discloses a laminate film comprising a polyolefin resin layer, preferably polypropylene and a heat sealable or winding layer comprising a ternary ethylene propylene butene copolymer, where the polyolefin layer has been discharge treated comprising at least 0.3 nitrogen functional groups and a metal layer, preferably aluminum layer having an optical density of about 2.0 to 4.0, wherein the discharge treatment is produced in a CO₂ and N₂ environment (paragraph 0010 and 0011). Chang further discloses the polyolefin resin layer will have a thickness of about 6 to 40 microns thick (paragraph 0016). Chang discloses the barrier durability of the film is at 9% elongation of 46.5 cc/m²/day or less oxygen transmission rate (paragraph 0031). Chang discloses the heat sealable layer comprising amorphous silica (example 1) and where the laminate film has a second polyolefin resin layer (claim 13). Chang discloses the heat sealable layer has a thickness of 0.5 to 5.0 micron and an anti-blocking agent of about 0.05 to 0.5 percent weight of heat sealable or winding layer (claims 5-6), meeting the limitation of claims 6 and 7. Chang discloses the winding layer comprises a crystalline polypropylene or matte layer of a block copolymer blend of polypropylene and one or more other polymers having a roughened surface and is treated for lamination or coating with adhesives and ink (claims 8 and 9), meeting the limitations of 9 and 10. Chang does not disclose that the laminate film has a thickness of the second polyolefin resin layer as in instant claims 15 and 39. However, such thickness is a property which can be easily determined by one of ordinary skill in the art. With regard

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to the limitation of the thickness, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. thickness) fails to render claims patentable in the absence of unexpected results. The thickness is optimizable as it directly affects the durability and resiliency of the laminate film. As such, it is optimizable. It would have been obvious to one of ordinary skill in the art to make the second polyolefin film with the limitations of the thickness since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215 (CCPA 1980).

This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by a showing of a date of invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131. For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

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Claim Rejections – 35 USC § 103(a)

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3-6, 11-13, 15-16, 25, 27-30, 35-37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. (U.S. 6,106,933).

Nagai discloses a laminate film comprising a polypropylene layer, polyolefin resin layer and alumina layer (metal layer) (column 2, lines 20-64) and keeping the gas barrier properties even after elongation (column 2, lines 20-24) where the oxygen transmission rate of the laminate film is 45 c/m²/day or less, and even after 2% elongation, the oxygen transmission rate is kept (column 7, lines 14-63). Nagai discloses the film was discharge treated on the surface (column 11, lines 63-66) where it was treated in carbondioxide acid gas/nitrogen gas atmosphere (column 15, lines 44-47). The reference discloses the film is further laminated with a heat sealable resin (column 5, line 16) and where the metal layer has a thickness of 5 to 50nm (column 6, lines 59-60). Nagai does not does not disclose that the laminate film has an optical density or thickness of the second polyolefin resin layer as in instant claims 1, 3-6, 12-13, 15, 25, 27-28, 30, 36 and 39. However, such optical density and thickness is a property which can be easily determined by one of ordinary skill in the art. With regard to the limitations of the optical density and thickness, absent a showing of unexpected

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results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. optical density and thickness) fails to render claims patentable in the absence of unexpected results. The optical density and thickness are optimizable as they directly affect the durability and resiliency of the laminate film. As such, they are optimizable. It would have been obvious to one of ordinary skill in the art to make the second polyolefin film with the limitations of the thickness since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Additionally, Nagai does not show that the first polyolefin layer comprises at least about 0.3% nitrogen functional groups as in instant claim 3. However, such percentages of nitrogen functional groups are properties which can be easily determined by one of ordinary skill in the art. The aforementioned limitation is result effective as it controls the adhesiveness of the film. As such, it is optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the laminate film with the limitation of the percentages of the nitrogen functional groups since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215 (CCPA 1980).

Claim Rejections – 35 USC § 103(a)

8. Claims 14, 17-18, 38 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. (U.S. 6,106,933) in view of Kurokawa et al., (U.S. 5,698,317).

Nagai is relied upon as above for claims 3. Nagai does not disclose additives of adhesion enhancer comprising petroleum or terpene resins as in instant claims 17 nor does Nagai show that the additive comprises 5 to 30% by weight of the second polyolefin layer as in instant claim 18. Kurokawa shows a laminate film comprising a polypropylene resin layer, an aluminum metal layer, and a heat seal layer or wrapping layer wherein the polypropylene layers comprise additives of petroleum or terpene resins in an amount of about 5- 30% of the resin layer (column 2, lines 50-53). It would have been obvious to one having ordinary skill in the art to include petroleum or terpene resins, in the laminated film of Nagai, in the concentrations as in the instant invention because these are known to enhance metal adhesion, lubricity, or viscosity of the layers (column 3, lines 1-5). Though Nagai shows that the outer surface of the first polypropylene layer has a nitrogen atom number/carbon atom number ratio of from 0.005 to 0.05 (column 4, lines 59-67).

Claim Rejections – 35 USC § 103(a)

9. Claims 19-20 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. (U.S. 6,106,933) in view of Kurokawa et al., (U.S. 5,698,317) further in view of Tanizaki et al., (U.S. 5,998,039).

Nagai and Kurokawa are relied upon as above for claims 3, 14 and 38. Nagai does not show the wax additives in about 1 to 15% by weight as in instant claims 19 and 20. Tanizaki shows a food packaging polypropylene film wherein the film contains additives such as lubricants of polyethylene waxes (column 24, line 30 to column 26, line 40). It would have been obvious to one having ordinary skill in the art to use the lubricant waxes in the same concentrations as in the instant invention in the film of Nagai since it is known that such waxes provide desirable slip properties to polypropylene layers in food packaging products.

Claim Rejections – 35 USC § 103(a)

10. Claims 24 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. (U.S. 6,106,933) in view of Yokoyama et al., (U.S. 5,939,205) in view of Akao et al, (U.S. 5,492,741).

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Nagai is relied upon as above for claims 1 and 25. Nagai does not show that the metal layer comprises the aluminum oxide and aluminum-enriched layers of instant claims 24 and 46. Yokoyama shows a gas barrier resin film comprising a polyamide film and a laminate of two or more layers of aluminum and aluminum oxide used for food packaging (column 6, lines 11-21). Yokoyama shows that the metal layers have thicknesses of 10-5000Å (column 6, lines 22-27). Akao shows a packaging material comprising polypropylene layers and a metal layer of aluminum, its alloys, and any other metal capable of metallizing with a purity of aluminum being not less than 95% with a thickness of 55 to 1200Å (column 6, lines 41-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make multiple aluminum and aluminum oxide layers with the thicknesses, purity, and arrangement as in the instant invention because such thicknesses and concentrations of aluminum are effective for the physical strength, light-shielding ability, antistatic property, moistureproofness, cost, and quality of the packaging film (column 6, lines 61-64 of Akao).

Response to Arguments

11. Rejection of claims 1, 3, 25 and 27 made under 35 USC 112, first paragraph is withdrawn due to Applicants canceling the claim language "substantially free from slip additives".

Applicant's remarks to 35 USC 103(a) as being unpatentable over Tsuchiya et al. (U.S. 5,137,955) are moot based on grounds of new rejection. Applicant's remarks to 35

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USC 103(a) as being unpatentable over Tsuchiya et al. (U.S. 5,137,955) in view of Kurokawa et al., (U.S. 5,698,317) are moot based on grounds of new rejection.

Applicant's remarks to 35 USC 103(a) as being unpatentable over Tsuchiya et al. (U.S. 5,137,955) in view of Tanizaki et al., (U.S. 5,998,039) are moot based on grounds of new rejection. Applicant's remarks to 35 USC 103(a) as being unpatentable over Tsuchiya et al. (U.S. 5,137,955) in view of Yokoyama et al., (U.S. 5,939,205) in view of Akao et al, (U.S. 5,492,741) are moot based on grounds of new rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



Lawrence D. Ferguson
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

